

Serial No. 10/646,202

Remarks

The various parts of the Office Action (and other matters, if any) are discussed below under appropriate headings.

Specification

The Title of the application has been amended. Accordingly, the objection should be withdrawn.

Brief descriptions of Figures 11-13 have been added without adding any new matter to the application. Therefore, the objection should be withdrawn.

Claim Rejections - 35 USC § 112

Claims 10 and 20 have been amended to correct typographical errors. Therefore, the rejections should be withdrawn.

Claim Rejections - 35 USC § 102

Claim 1, as amended, recites an interferometer that includes, *Inter alia*, a first beamsplitter, a second beamsplitter and a single nonreciprocal optical element. The first beamsplitter includes a second output providing optical radiation in a path leading to an optical radiation detector via a reference arm, wherein the optical path excludes a nonreciprocal optical element.

Tearney et al. fails to disclose or fairly suggest a first beamsplitter including a second output providing optical radiation in a path leading to an optical radiation detector via a reference arm, wherein the optical path excludes a nonreciprocal optical element. Rather, Tearney et al. discloses a pair of nonreciprocal optical elements, one of which is in an optical path leading to an optical radiation detector via a reference arm.

Not only does Tearney et al. fail to anticipate the claimed invention, but at column 5, line 64 - column 6, line 16 Tearney et al. teaches away from the use of a single nonreciprocal optical element. For at least these reasons, claim 1 and claims 2, 4-11, 13 and 14 distinguish patentably over Tearney et al. Accordingly, the rejection should be withdrawn.

Claim 19 recites an interferometer that includes, *inter alia*, a second beamsplitter having a first input connected to receive optical radiation transmitted by the sample and a second input connected to receive optical radiation from a reference arm via a nonreciprocal optical element.

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Tearney et al. fails to disclose or fairly suggest a transmissive system in which a second beamsplitter has a first input connected to receive optical radiation transmitted by the sample. Rather, Tearney et al. is only concerned with reflective sample arms, e.g., a sample arm in which optical radiation is reflected by the sample. For at least this reason, claim 19 distinguishes patentably over Tearney et al, and the rejection should be withdrawn.

Claim 20, as amended, recites an interferometer that includes, *inter alia*, a first beamsplitter having a first output for providing optical radiation from a first input to a sample to be imaged, and a second output for providing optical radiation in a reference arm including a transmissive delay line. Claim 20 further recites a second beamsplitter having a first input connected to receive optical radiation transmitted by the sample and a second input connected to receive optical radiation from the reference arm via the transmissive delay line.

Tearney et al. fails to disclose or fairly suggest the use of a transmissive delay line. Further, Tearney et al. fails to disclose or fairly suggest a second beamsplitter having a first input connected to receive optical radiation transmitted by the sample. As discussed above, Tearney et al. is concerned with reflective systems, e.g., systems in which the reference arm includes a reflective element. For at least this reason, claim 20 distinguishes patentably over Tearney et al, and the rejection should be withdrawn.

Claim 21 recites an interferometer system that includes, *inter alia*, a second beamsplitter for receiving optical radiation transmitted by the sample and directing at least some of such optical radiation to an optical detector.

As discussed above with respect to claim 19, Tearney et al. fails to disclose or fairly suggest a transmissive system in which a second beamsplitter receives optical radiation transmitted by the sample. Rather, Tearney et al. is only concerned with reflective sample arms, e.g., a sample arm in which optical radiation is reflected by the sample. For at least this reason, claim 21 distinguishes patentably over Tearney et al, and the rejection should be withdrawn.

Claim 22, as amended, recites an interferometer system that includes, *inter alia*, a second beamsplitter for receiving optical radiation transmitted by the sample and directing at least some of such optical radiation to an optical detector.

As discussed above with respect to claims 19 and 21, Tearney et al. fails to disclose or fairly suggest a transmissive system in which a second beamsplitter receives optical radiation transmitted by the sample. Rather, Tearney et al. is only concerned with reflective sample arms, e.g., a sample arm in which optical radiation is reflected by the sample. For at least this reason, claim 22 distinguishes patentably over Tearney et al, and the rejection should be withdrawn.

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New claim 23 recites an interferometer system that includes, *inter alia*, a pair of beamsplitters, the first beamsplitter directing light to and receiving light from a reference and the second beamsplitter receiving light representative of characteristics of a sample and of such reference and directing such light to a detector.

Tearney et al. fails to disclose or fairly suggest the recited combination of claimed features. Therefore, it is respectfully submitted that claim 23 distinguishes patentably over the references of record.

Allowable Subject Matter

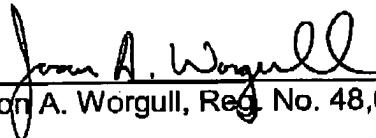
Claims 3 and 18 have been indicated to contain allowable subject matter. Each of claims 3 and 18 has been rewritten in independent form including limitations of the respective base claims and any intervening claims. Accordingly, claims 3 and 18 are in condition for allowance.

Conclusion

In view of the foregoing, request is made for timely issuance of a notice of allowance.

Respectfully submitted,

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